



REPORT TO CITY PLAN COMMISSION

Plan Commission Public Hearing Date: November 13, 2018

Common Council Meeting Date: December 5, 2018

Item: Special Use Permit #8-18 for an essential services facility (utility substation)

Case Manager: David Kress

GENERAL INFORMATION

Owner: Appleton West End Realty Ltd. c/o Bruce Chudacoff

Applicant: We Energies c/o Tiffany Goebel

Address/Parcel #: 139 North State Street (Tax Id #31-5-1138-02)

Petitioner's Request: The applicant is requesting a Special Use Permit for an essential services facility (utility substation).

BACKGROUND

The applicant's 0.71-acre site is located west of North State Street and north of West College Avenue. An existing utility (electric) substation is currently located near the subject area on West Johnston Street, east of the railroad right-of-way. The applicant proposes to replace the existing 34.5 kV–4 kV electric substation on the nearby site (parcel #31-5-1074-00) with a new 34.5 kV–12 kV electric substation on the subject site. This is part of a larger effort to convert the aging 4 kV system to the modern 12 kV standard. Earlier phases of the conversion included the construction of new 12 kV substations on East Northland Avenue and East Winnebago Street and the retirement/removal of other 4 kV substations.

STAFF ANALYSIS

Project Summary: The applicant proposes to remove the existing parking lot and establish an essential services facility (utility substation) on the subject site. Equipment, including transformers, a metal-clad power distribution center, and 59-foot lightning mast, will be enclosed in a fenced area and screened by landscaping, as shown on the attached development plan. The antennas on the lightning mast are needed for communication between We Energies sites only; no other companies are allowed to co-locate. One driveway is proposed on North State Street and another driveway is proposed on North Fair Street, with North State Street being the primary entrance. The final grade within the substation yard will be crushed aggregate.

Existing Site Conditions: The site is currently developed with an off-street parking lot with approximately 75 parking spaces. Special Use Permit #9-05 and Site Plan #05-29 were approved in 2005 for the off-street parking lot, and it was constructed later that year. Access is currently provided by one curb cut on North State Street.

Special Use Permit #8-18
November 13, 2018
Page 2

Zoning Ordinance Requirements: The subject property has a zoning designation of CBD Central Business District. Per Section 23-114(e) of the Municipal Code, an essential services facility (utility substation) requires a Special Use Permit in the CBD District. The definition of essential services, per the Zoning Ordinance, means overhead or underground electrical, gas, steam or water transmission or distribution systems, and collection, communication, supply or disposal systems and structures used by public utilities or governmental departments or commissions or systems as are required for the protection of public health, safety or general welfare, including: utility substations, towers, poles, wires, mains, drains, sewers, pipes, conduits, cables and similar improvements. In order to permit an essential services facility (utility substation), the Plan Commission makes a recommendation to the Common Council who will make the final decision on the Special Use Permit. A two-thirds (2/3) vote of the Common Council is required for approval.

Pursuant to Section 23-66(h)(2) of the Municipal Code, there are minimum standards that apply to utility substations. Based on the attached development plan, all identified buildings and equipment would be located outside of any required setbacks, a fence enclosure and landscaping would prevent unauthorized access and provide visual screening, and noise levels would not exceed 60 decibels at any lot line of the subject property. While landscaping is already proposed along the west, north, and east sides of the subject site, a stipulation is drafted requiring landscaping along the south side of the subject site as well. Therefore, the minimum standards would be met, as long as all stipulations are satisfied. Ultimately, Site Plan review and approval is required, pursuant to Section 23-570 of the Municipal Code, prior to the issuance of a building permit by the Inspections Division.

Operational Information: A plan of operation is attached to the Staff Report.

Surrounding Zoning and Land Uses: The surrounding area is under the jurisdiction of the City of Appleton (north, south, east, and west). The uses are generally commercial and residential in nature.

North: CBD Central Business District and R-2 Two-Family District. The adjacent land uses to the north are currently a mix of two-family and single-family residential.

South: CBD Central Business District. Two utility structures are located immediately south of the subject property.

East: CBD Central Business District. The adjacent land uses to the east are currently a mix of commercial and residential uses.

West: CBD Central Business District. The adjacent land uses to the west are currently a mix of commercial and residential uses.

Appleton Comprehensive Plan 2010-2030: Community and Economic Development staff has reviewed this proposal and determined it is compatible with the Central Business District designation shown on the City's *Comprehensive Plan 2010-2030* Future Land Use Map. Listed below are related excerpts from the City's *Comprehensive Plan 2010-2030*.

Special Use Permit #8-18
November 13, 2018
Page 3

Goal 5 – Utilities and Community Services

Appleton will provide excellent public utility and community services at a reasonable cost, and will work with private utility companies to ensure quality service delivery.

OBJECTIVE 7.2 Utilities and Community Facilities:

Ensure that municipal services and utilities, as well as privately distributed energy sources are delivered in a safe and sustainable manner.

OBJECTIVE 10.2 Land Use:

Encourage redevelopment to meet the demand for a significant share of future growth, and to enhance the quality of existing neighborhoods.

Finding of Fact: This request was reviewed in accordance with the standards for granting a Special Use Permit under Sections 23-66(e)(1-6) and 23-66(h)(2) of the Municipal Code, which were found in the affirmative, as long as all stipulations are satisfied.

Technical Review Group (TRG) Report: This item was discussed at the October 23, 2018 Technical Review Group meeting. No negative comments were received from participating departments.

RECOMMENDATION

Staff recommends, based on the above, that Special Use Permit #8-18 for an essential services facility (utility substation) at 139 North State Street (Tax Id #31-5-1138-02), as shown on the attached maps and per attached plan of operation, along with the attached resolution, **BE APPROVED** to run with the land, subject to the following conditions:

1. The applicant is responsible for compliance with all applicable local, state, and federal rules and regulations, and must obtain all appropriate permits and approvals.
2. Any deviations from the approved development plan may require a major or minor amendment request to this Special Use Permit, pursuant to Section 23-66(g) of the Municipal Code.
3. Compliance with the plan of operation is required at all times. Changes to the plan of operation shall be submitted to the Community and Economic Development Department for review and approval.
4. The provisions for antennas not exceeding 60 feet in height found in Section 23-43(c)(8) of the Municipal Code shall be complied with, as applicable.
5. Around the outside perimeter of the substation yard/fence, except where gates are shown, evergreen and/or deciduous plantings shall be installed and continuously maintained for year-round visual screening from adjacent property.
6. The minimum standards for a utility substation found in Section 23-66(h)(2) of the Municipal Code shall be complied with, as applicable.

Special Use Permit #8-18

November 13, 2018

Page 4

7. A security fence around the perimeter of the transformers, power distribution center, lightning mast with antennas, and other related equipment shall be continuously maintained to provide for visual screening and safety.
8. The level of noise emanating from the utility substation shall not exceed 60 decibels measured at any lot line of the subject property.
9. The driveways accessing the subject site shall be paved from the lot line and up to the entrance gates of the utility substation compound to be compatible with adjacent paved driveway surfaces and to control dust, drainage, and weeds.
10. Site Plan review and approval is required, pursuant to Section 23-570 of the Municipal Code, prior to the issuance of a building permit by the Inspections Division.
11. As requested by the current property owner, the Special Use Permit does not fully take effect unless and until the applicant, We Energies, owns the property. After transfer of ownership, the Special Use Permit will run with the land.

RESOLUTION

**CITY OF APPLETON
RESOLUTION APPROVING SPECIAL USE PERMIT #8-18**

WHEREAS, We Energies has applied for a Special Use Permit for an essential services facility (utility substation) located at 139 North State Street, also identified as Parcel Number(s) 31-5-1138-02; and

WHEREAS, the location for the proposed essential services facility (utility substation) is located in the CBD Central Business District and the proposed use is permitted by special use within this zoning district; and

WHEREAS, the City of Appleton Plan Commission held a public hearing on November 13, 2018, on Special Use Permit #8-18 at which all those wishing to be heard were allowed to speak or present written comments, and other materials presented at the public hearing; and

WHEREAS, the City of Appleton Plan Commission has considered the application, the staff reports, oral and written, the Comprehensive Plan and zoning on the subject property, the testimony, written comments, and other materials presented at the public hearing; and

WHEREAS, the City of Appleton Plan Commission reviewed the standards for granting a Special Use Permit under Sections 23-66(e)(1-6) and 23-66(h)(2) of the Municipal Code, and forwarded Special Use Permit #8-18 to the City of Appleton Common Council with a favorable or not favorable (CIRCLE ONE) recommendation; and

WHEREAS, the City of Appleton Common Council has reviewed the report and recommendation of the City of Appleton Plan Commission at their meeting on _____, 2018 and found it to be acceptable.

NOW, THEREFORE, BE IT RESOLVED, that the City of Appleton Common Council approves Special Use Permit #8-18 for an essential services facility (utility substation) located at 139 North State Street, also identified as Parcel Number(s) 31-5-1138-02 and orders as follows:

CONDITIONS OF SPECIAL USE PERMIT #8-18

1. The applicant is responsible for compliance with all applicable local, state, and federal rules and regulations, and must obtain all appropriate permits and approvals.
2. Any deviations from the approved development plan may require a major or minor amendment request to this Special Use Permit, pursuant to Section 23-66(g) of the Municipal Code.
3. Compliance with the plan of operation is required at all times. Changes to the plan of operation shall be submitted to the Community and Economic Development Department for review and approval.
4. The provisions for antennas not exceeding 60 feet in height found in Section 23-43(c)(8)

of the Municipal Code shall be complied with, as applicable.

5. Around the outside perimeter of the substation yard/fence, except where gates are shown, evergreen and/or deciduous plantings shall be installed and continuously maintained for year-round visual screening from adjacent property.
6. The minimum standards for a utility substation found in Section 23-66(h)(2) of the Municipal Code shall be complied with, as applicable.
7. A security fence around the perimeter of the transformers, power distribution center, lightning mast with antennas, and other related equipment shall be continuously maintained to provide for visual screening and safety.
8. The level of noise emanating from the utility substation shall not exceed 60 decibels measured at any lot line of the subject property.
9. The driveways accessing the subject site shall be paved from the lot line and up to the entrance gates of the utility substation compound to be compatible with adjacent paved driveway surfaces and to control dust, drainage, and weeds.
10. Site Plan review and approval is required, pursuant to Section 23-570 of the Municipal Code, prior to the issuance of a building permit by the Inspections Division.
11. As requested by the current property owner, the Special Use Permit does not fully take effect unless and until the applicant, We Energies, owns the property. After transfer of ownership, the Special Use Permit will run with the land.

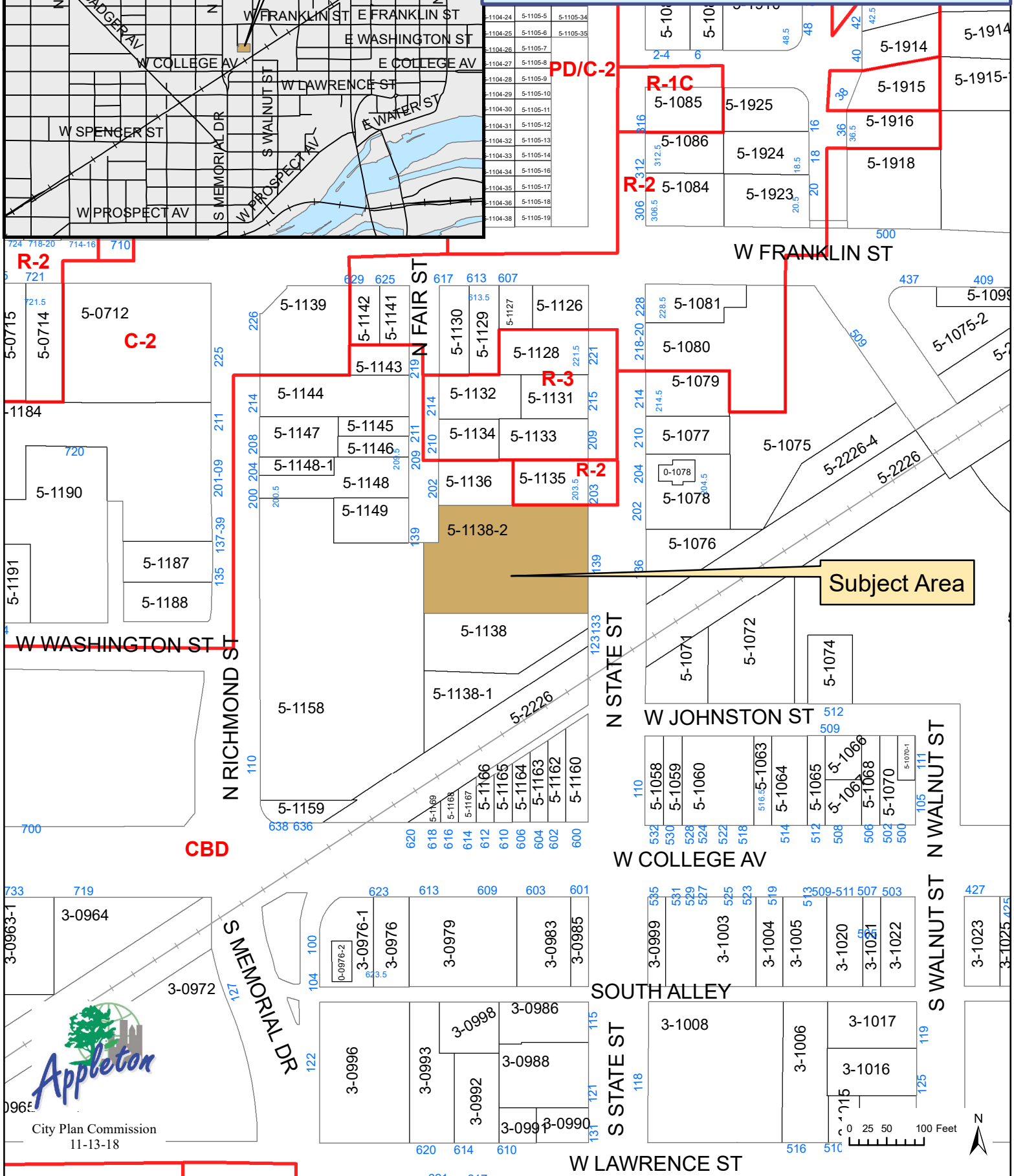
Adopted this _____ day of _____, 2018.

Timothy M. Hanna, Mayor

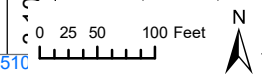
ATTEST:

Kami Lynch, City Clerk

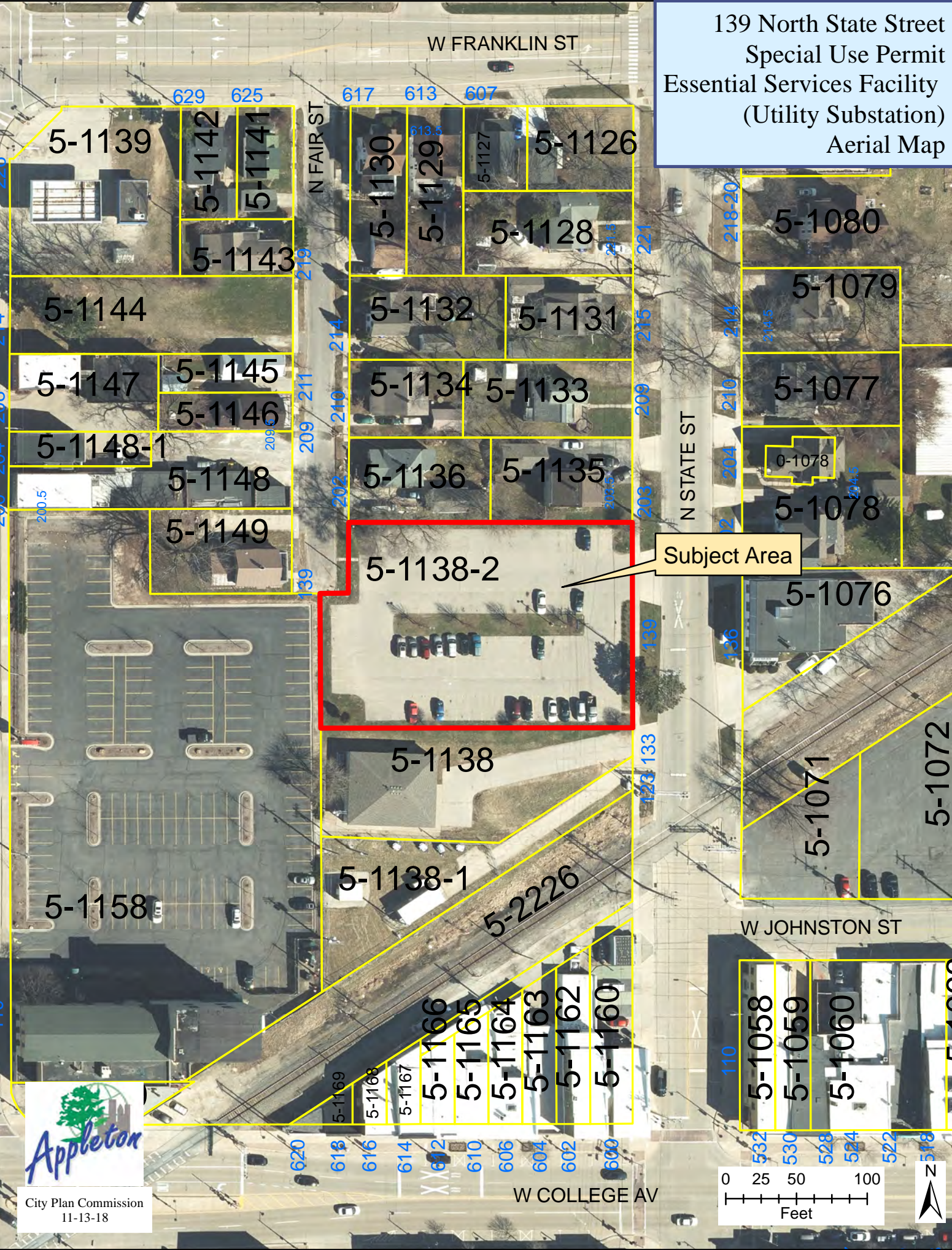
139 North State Street Special Use Permit Essential Services Facility (Utility Substation) Zoning Map



Subject Area



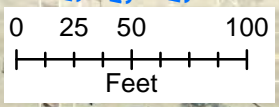
139 North State Street
Special Use Permit
Essential Services Facility
(Utility Substation)
Aerial Map



Subject Area



City Plan Commission
11-13-18



SITE & UTILITY PLAN

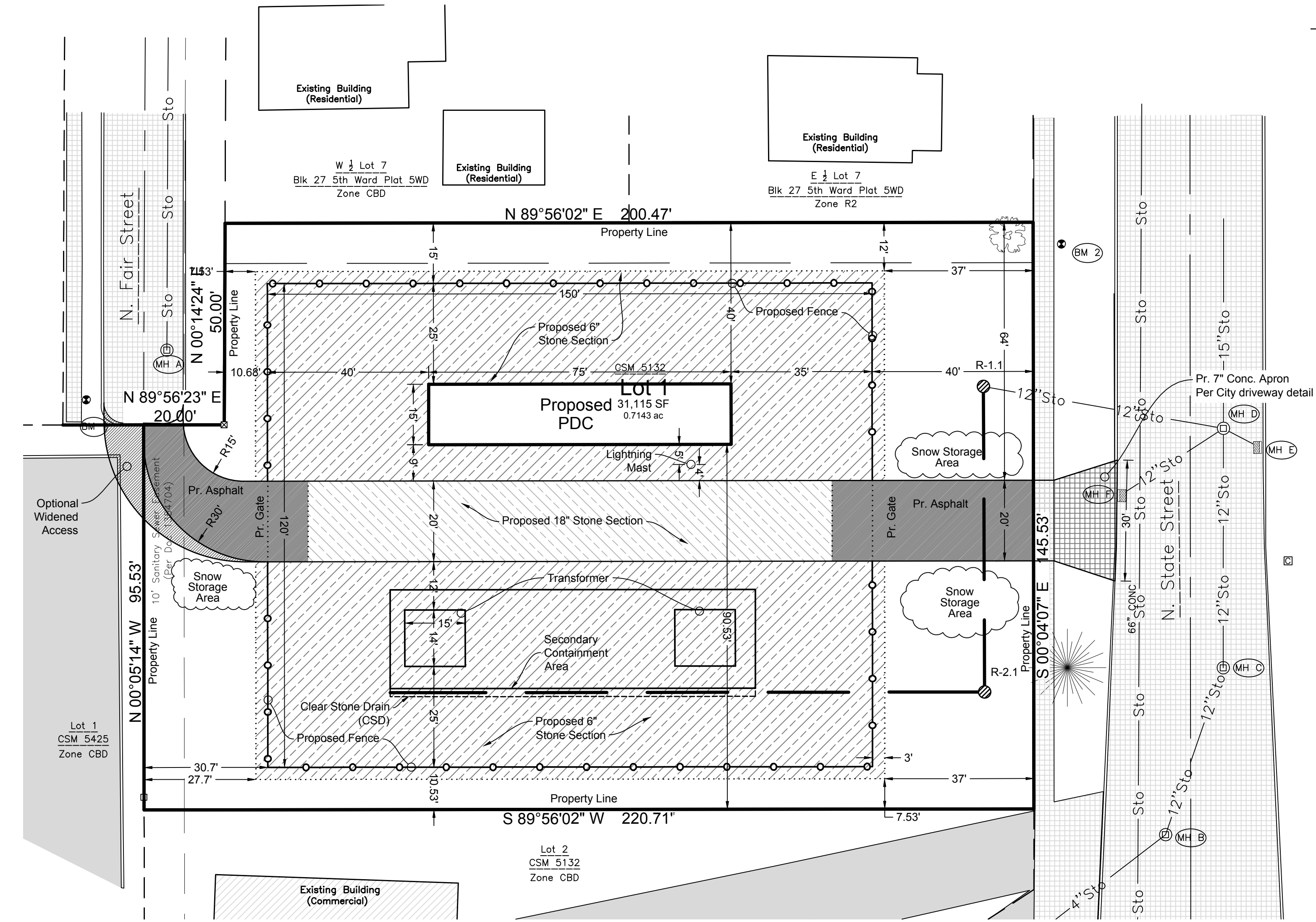
139 N. State Street
 City of Appleton, Outagamie County, WI
 For: We Energies

STORM SEWER PIPE SUMMARY

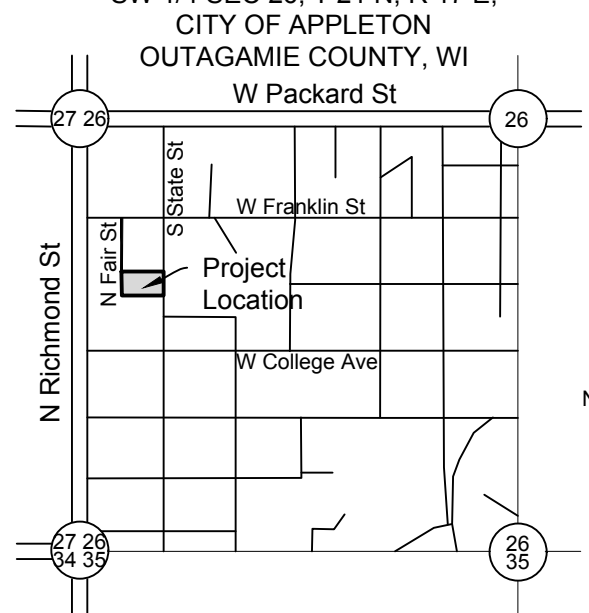
Reach	US	DS	US Inv	DS Inv	Length	Slope	Pipe Size (in)	Node Drop	GRASS AREA (SF)	ROOF AREA (SF)	PAVEMENT AREA (SF)	PEAK FLOW GPM	Flow (cfs)	Capacity (cfs)	Velocity (ft/s)
R-1.1	MH D		785.82	785.01	60	0.0135	12	0.00	12000	2500	0	212	1.52	4.48	5.7
R-2.1	R-1.1		786.05	785.82	75	0.0030	12	0.00	18600	2000	6900	468	1.04	2.11	2.7
CSD	R-2.1		789.19	786.25	147	0.0200	6	0.00	0	0	0	0	0.00	0.86	4.4

STORM SEWER STRUCTURE SUMMARY

Structure	Type	Size	Cover	Final Grade		Final Grade Depth
				Rim	Invert	
R-1.1	Catch Basin	36" ID	R-1550 (open)	789.00	785.82	3.18
R-2.1	Catch Basin	36" ID	R-1550 (open)	789.00	786.05	2.95



LOCATION MAP



Project Information

Agent:
 We Energies
 333 West Everett
 Milwaukee, WI 53201
 Business (414) 221-2850
 Fax (414) 221-2202

Site:
 Parcel ID # 315113802

139 North State Street
 Zoning: CBD Central Business District
 Construction Class: U
 Existing Use: Commercial

The facility will be an electric substation and will not manufacture, sell, distribute, or store products. No below grade/basement space.

No hazardous material will be stored onsite with the exception of acid contained within the battery cells located in the PDC.

Any existing sidewalk damaged during construction will be replaced as part of this project.

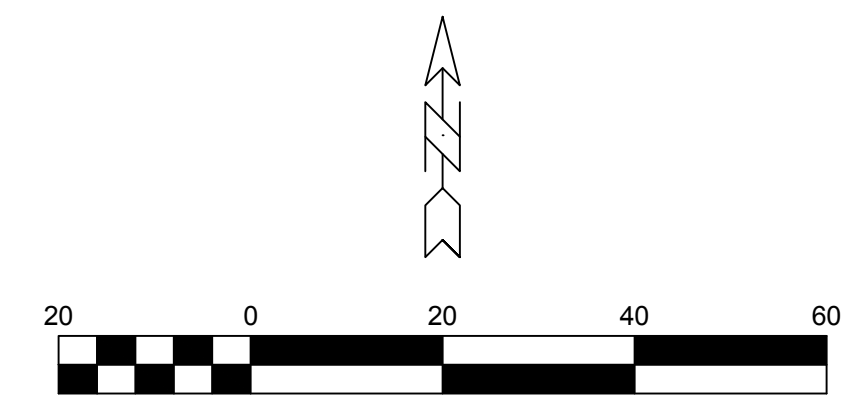
Perimeter fence shall conform to We Energies standard detail drawing.

Existing Site Information:
 Lot Area = 0.714 acres
 Building Area = 0.000 acres
 Pave Area = 0.552 acres
 Green Space = 0.162 acres
 Ex Impervious Surface percentage: 77.3%

Proposed Site Information:
 Lot Area = 0.714 acres
 Building Area = 0.022 acres
 Dense Gradation Aggregate Area = 0.060 acres
 Open Gradation Aggregate Area = 0.357 acres
 Asphalt Area = 0.042 acres
 Green Space = 0.233 acres
 Impervious Surface percentage: 17.4%
 (Excludes open gradation aggregate)

Setbacks:
 Front: none
 Rear: none; 10' if abutting residential zoned district.
 Side: none; 10' if abutting residential zoned district.

Construction Access:
 Construction traffic shall enter/exit from North State Street.

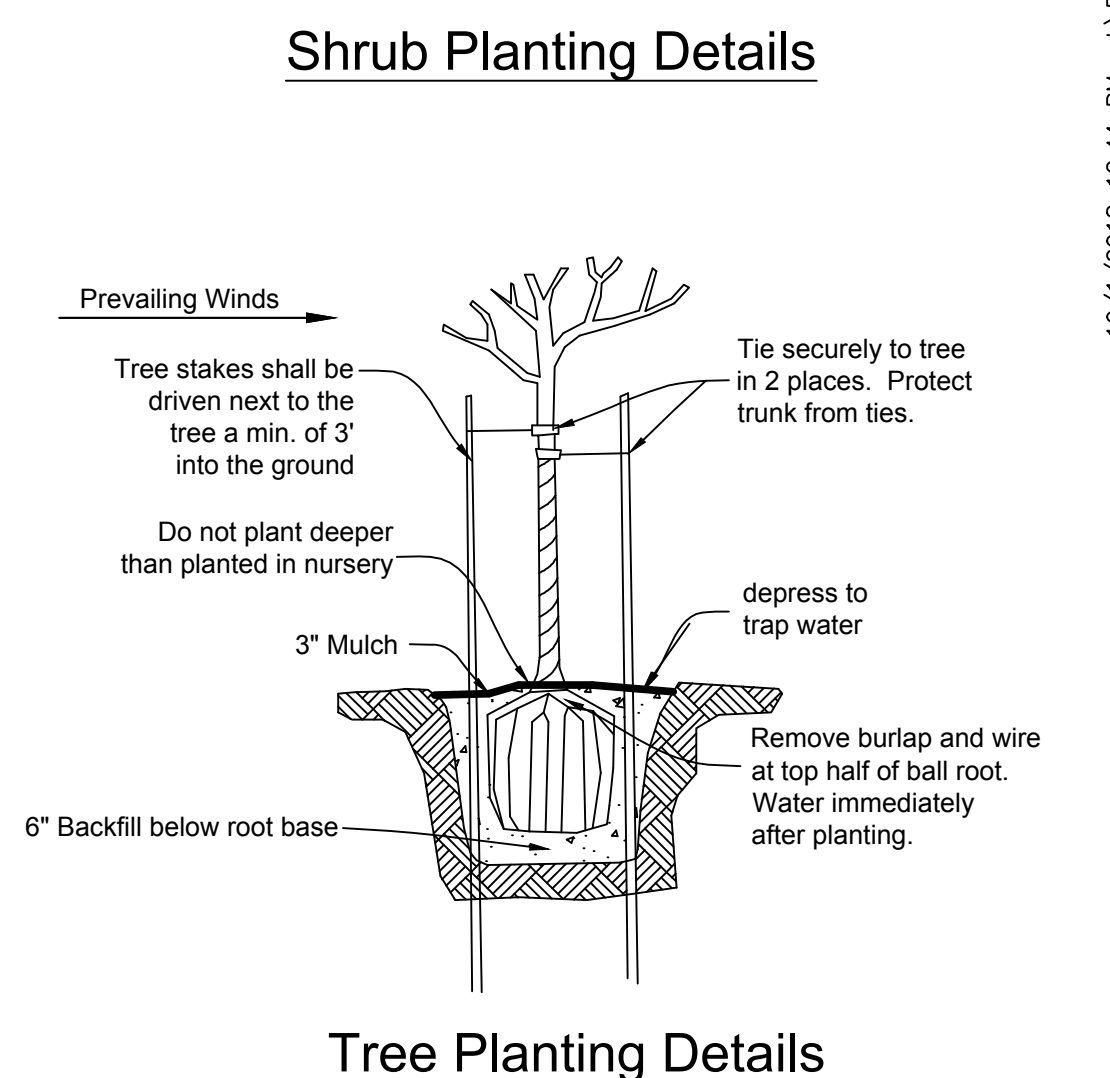
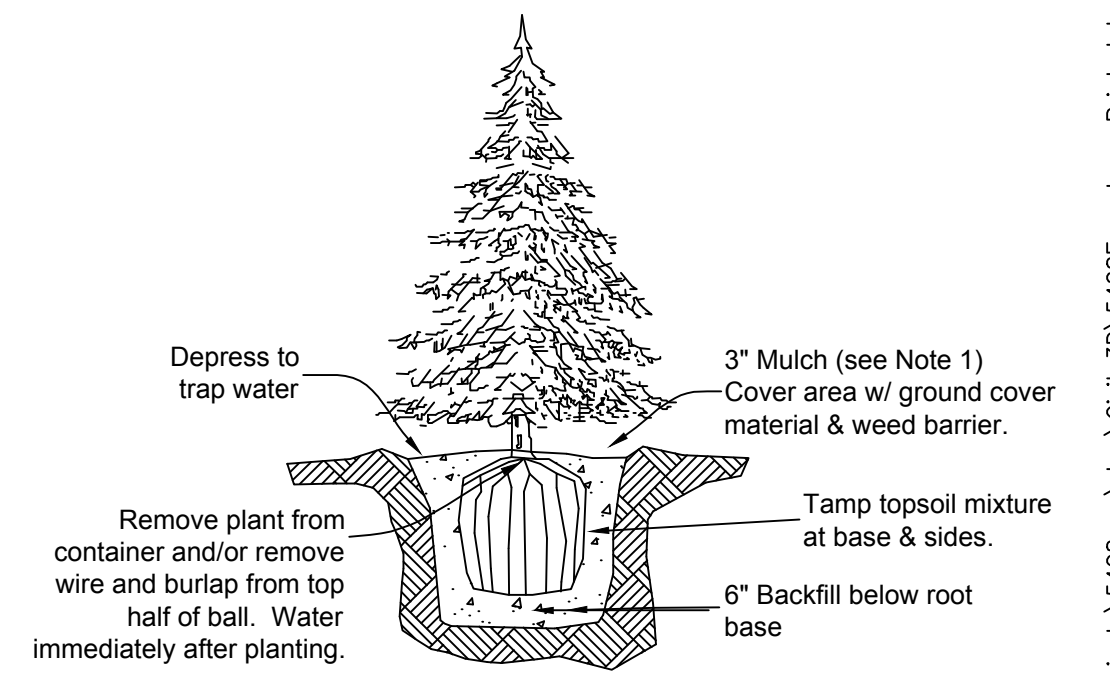
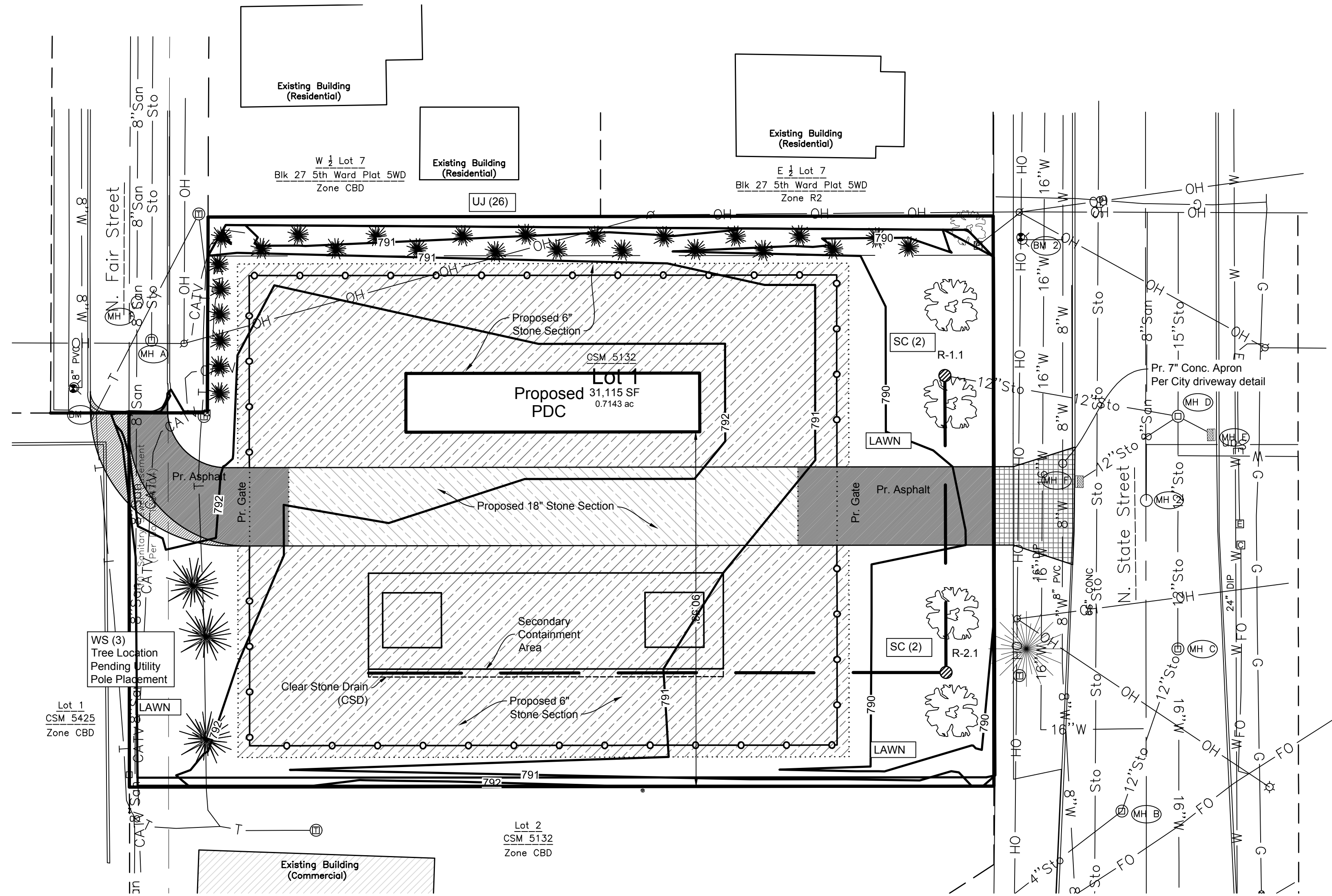


LEGEND

- CATV ——— Underground Cable TV
- FO ——— Underground Fiber Optic
- OH ——— Overhead Electric Lines
- Utility Guy Wire
- San ——— Sanitary Sewer
- Sto ——— Storm Sewer
- E ——— Underground Electric
- G ——— Underground Gas Line
- T ——— Underground Telephone
- W ——— Water Main
- Fence — Steel
- Fence — Wood
- Culvert
- 800 ——— Index Contour
- 799 ——— Intermediate Contour
- +799.9 ——— Ex Spot Elevation
- 608 ——— Proposed Storm Sewer
- Proposed Sanitary Sewer
- Proposed Water Main
- Proposed Contour
- Proposed Swale
- Proposed Culvert
- Proposed Asphalt
- Proposed 6" Crushed Stone
- Proposed 18" Crushed Stone
- Proposed Concrete
- Pr. High Security Fence
- Sanitary MH / Tank / Base
- Clean Out / Curb Stop / Pull Box
- Storm Manhole
- Inlet
- Catch Basin / Yard Drain
- Water MH / Well
- Hydrant
- Utility Valve
- Utility Meter
- Utility Pole
- Light Pole / Signal
- Guy Wire
- Electric Pedestal
- Electric Transformer
- Telephone Pedestal
- Telephone Manhole
- Proposed Sanitary Manhole
- Proposed Storm Manhole
- Proposed Curb Inlet
- Prop. Catch Basin / Yard Drain
- Proposed Endwall
- Proposed Hydrant
- Proposed Valve
- Proposed Curb Stop
- CATV Pedestal
- Gas Regulator
- Sign
- Post / Guard Post
- Deciduous Tree
- Coniferous Tree
- Bush / Hedge
- 3/4" Rebar Found
- 1" Iron Pipe Found
- Chiseled "X" Found
- Benchmark
- Asphalt Pavement
- Concrete Pavement
- ▲ Proposed Reducer
- Proposed Plug
- Proposed Water MH
- Proposed Tee
- Proposed Cross
- Proposed 90° Bend
- Proposed 45° Bend
- Proposed 22.5° Bend

SHEET INDEX:

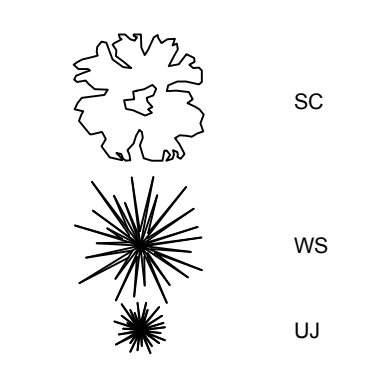
Sheet	Page
Site & Utility Plan	1.0
Topographic Survey	1.1
Demolition Plan	1.2
Drainage and Grading Plan	1.3
Erosion & Sediment Control Plan	1.4
Landscape Plan	1.5
Construction Details	2.1
Erosion & Sediment Control Details	2.2



Landscape Requirements

- Note:**
- All Planting beds are to be mulched with hardwood mulch.
 - Lawn areas are to be seeded with Wisconsin DOT seed mixture no. 40 or equivalent applied at 2 lbs per 1,000 square feet. Seeded areas not receiving e-mat will be mulched and anchored following DNR Technical Standard 105B.
 - All plantings shall be of adequate size and maturity to screen the substation from the adjacent properties. Deciduous shade trees must have a trunk size of 2.5 inches in diameter. Deciduous ornamental trees must have a trunk size of 1.5 inches in diameter. Evergreen trees/shrubs must be a minimum 48 inches in height. Deciduous shrubs must be a minimum 24" inches height.
 - Any plant species substitutions must be approved by the project engineer.

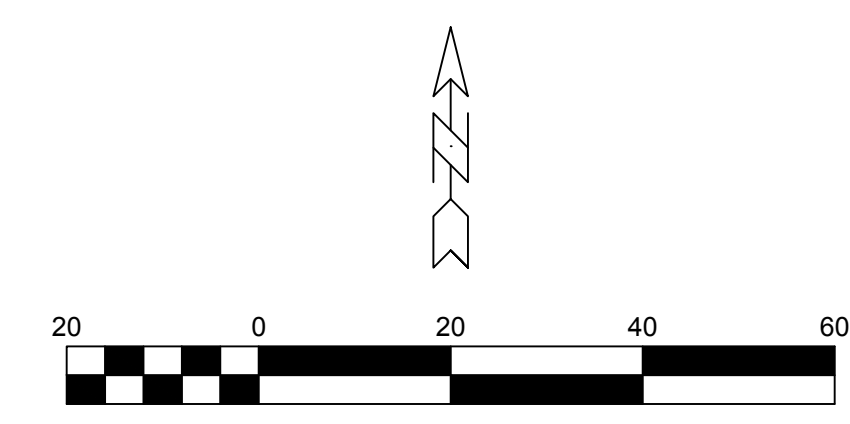
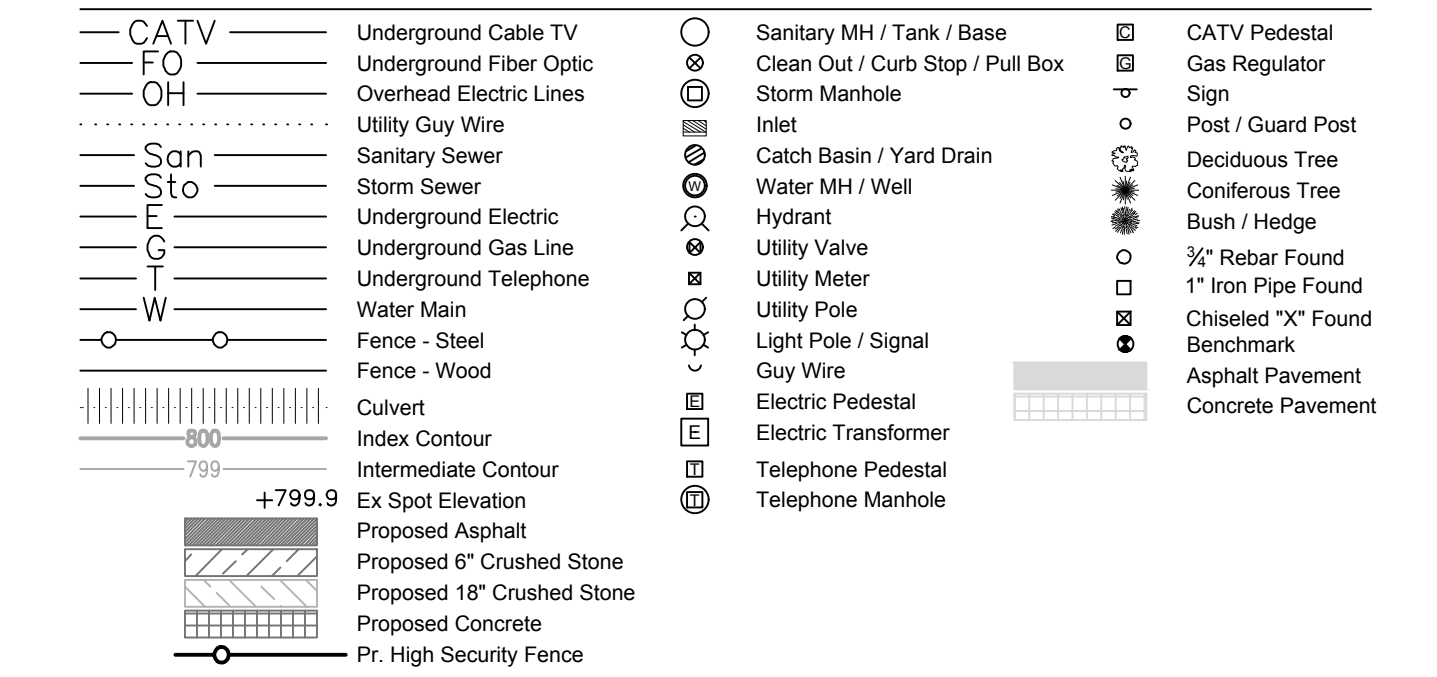
PLANT LEGEND



Plant Schedule

I.D.	Common Name	Latin Name	Planting Size	Mature Size Ht. / Spread	Qty.
WS	White Spruce	Pinus glauca	Refer Note #3	50'-60' / 15'	3
SC	Snowdrift Crabapple	Malus 'Snowdrift'	Refer Note #3	15'-20' / 15'-20'	4
UJ	Upright Juniper	Juniperus cultivars	Refer Note #3	15'-20' / 15'-20'	26

LEGEND



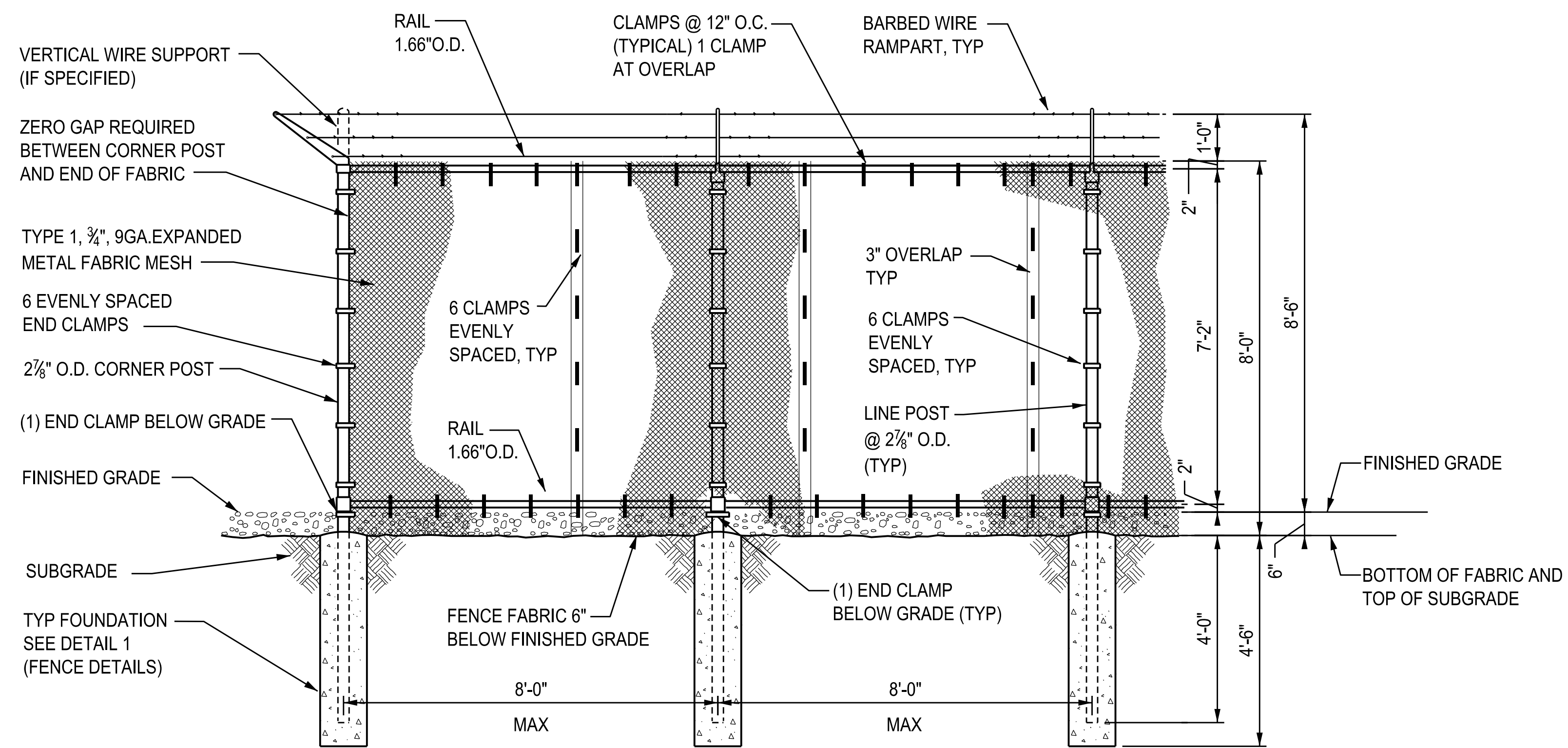
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DAVEL ENGINEERING & ENVIRONMENTAL, INC.
 CIVIL ENGINEERING CONSULTANTS
 1811 Racine Street, Menasha, WI 54952
 Ph: 920-991-1866 Fax: 920-830-9695
 www.davelinc.com

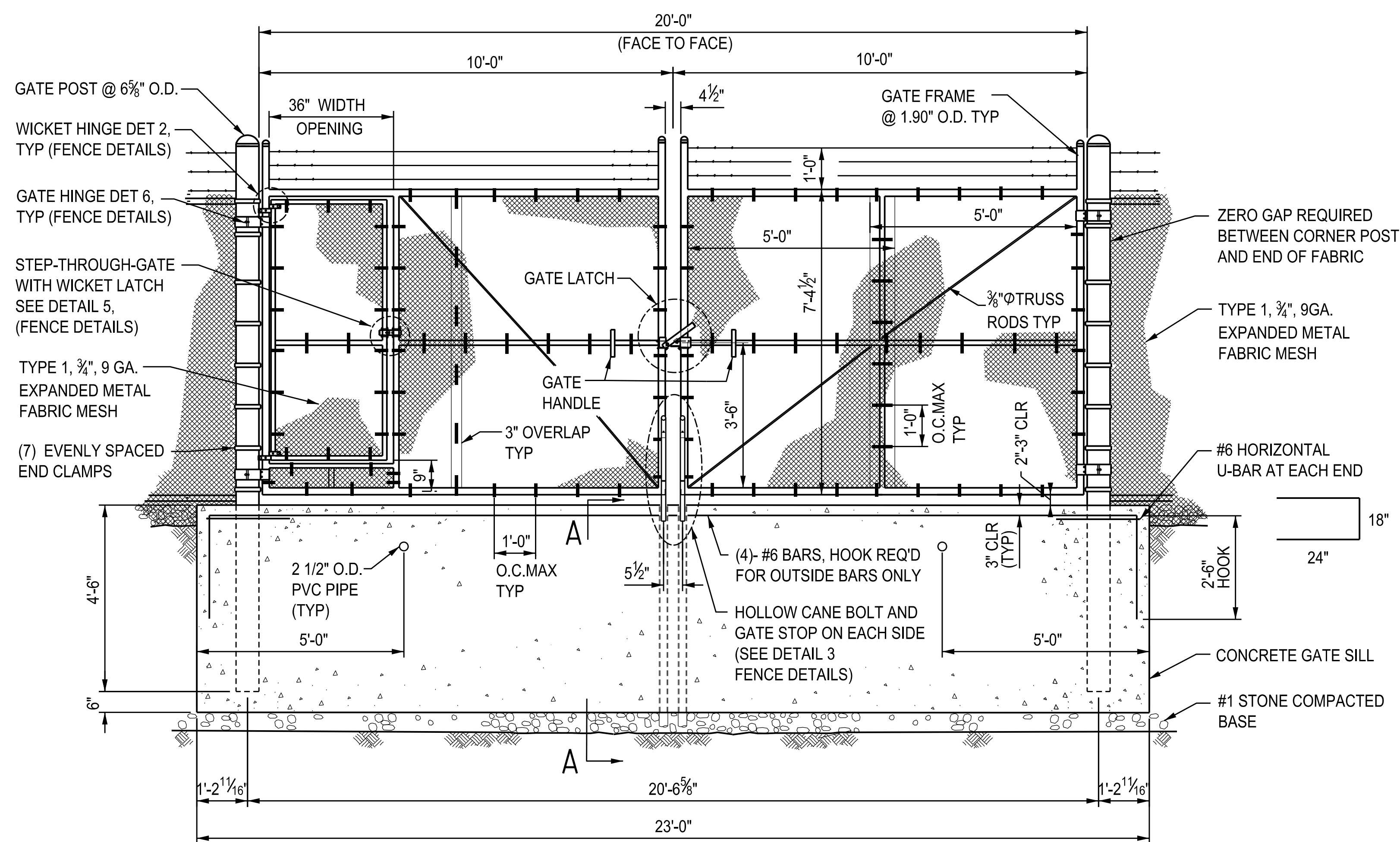
LANDSCAPE PLAN

139 N. State Street
 City of Appleton, Outagamie County, WI
 For: We Energies

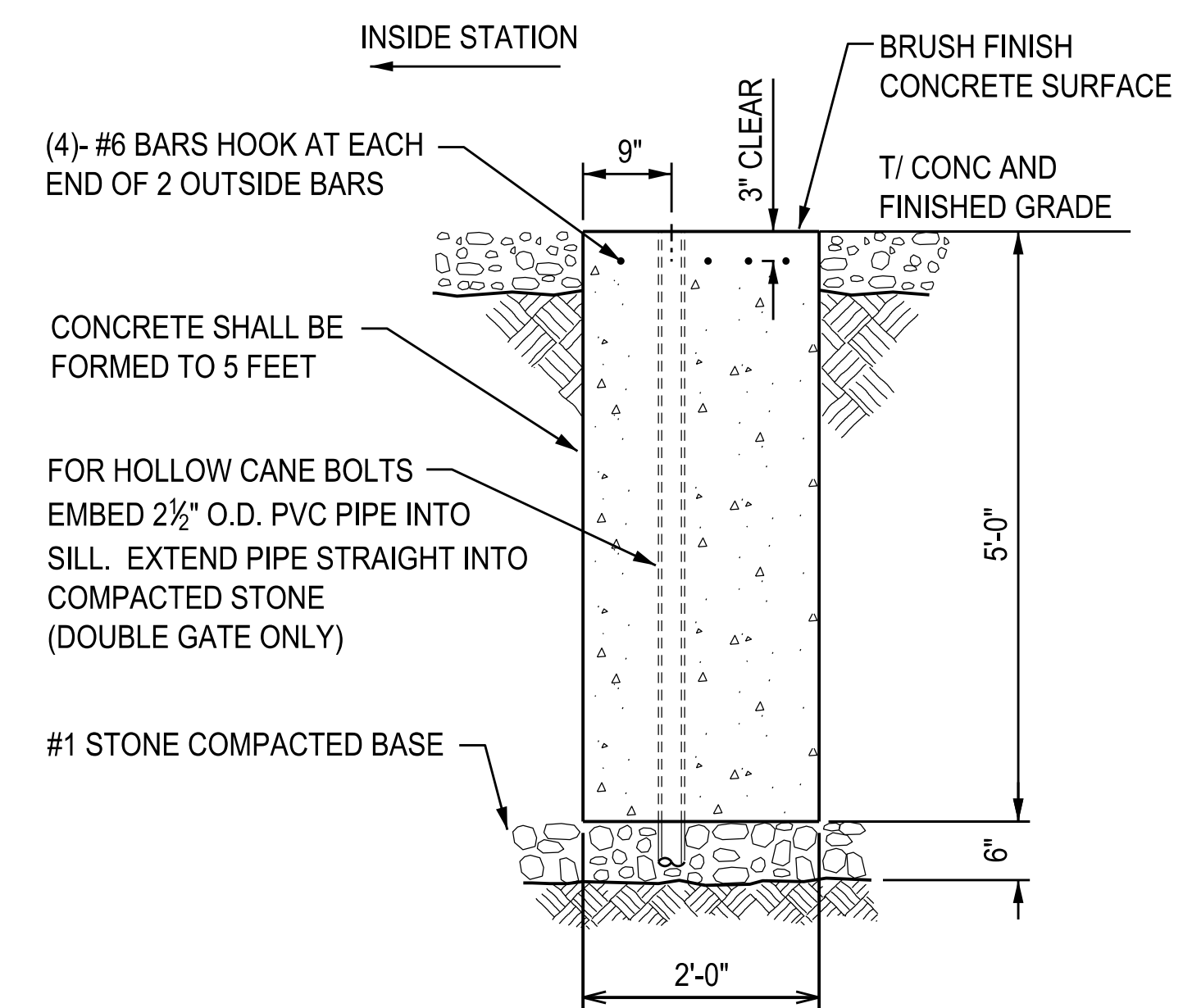
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Author:	TNW
Last Saved by:	taylor
Page:	1.5



FENCE SPAN



DOUBLE GATE ELEVATION



SECTION A-A
SCALE: 1 1/2" = 1'-0"

GENERAL NOTES

- ELEVATIONS SHOWN AS VIEWED FROM OUTSIDE SUBSTATION FENCE.
- INSTALL SHARP EDGE PROTECTION TO CUT EDGE OF STEEL MESH AROUND GATE AREAS.
- FOR ADDITIONAL INFORMATION SEE We Energies "SPECIFICATION FOR SUBSTATION FENCE" DOCUMENT #02-2268.
- SILL IS TO BE FORMED, DO NOT BANK POUR

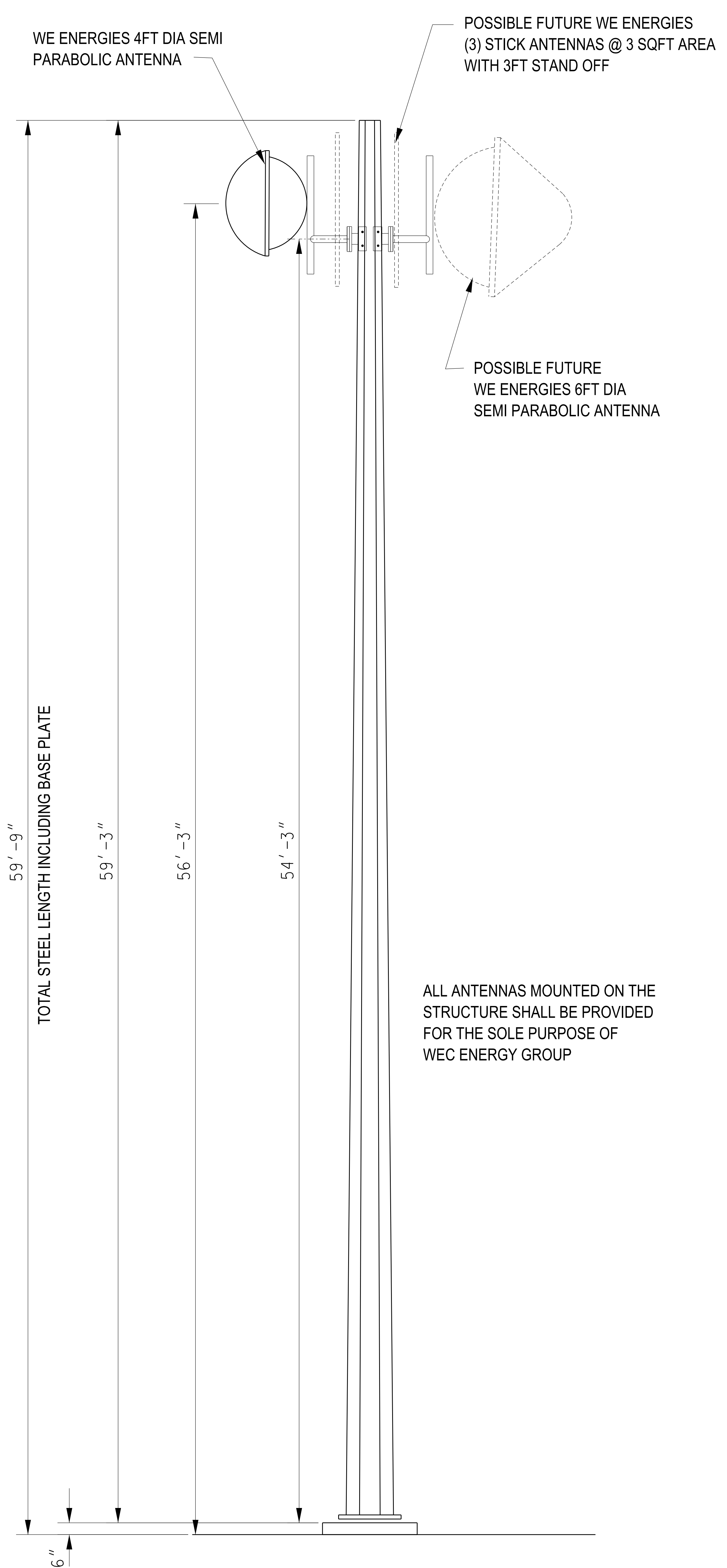
REFERENCE DRAWINGS

SUBSTATION FENCE DETAILS MF XXXXXX --PANL000000
 FENCE & GATE TYPICAL GROUND DETAILS MF XXXXXX --PANL000000

FROM TEMPLATE DWG: 731252.dgn

RELEASE FOR FABRICATION:	DATE:	REV.:
RELEASE FOR CONSTRUCTION:	DATE:	REV.:
RELEASE FOR AS BUILT:	DATE:	REV.:

SUBSTATION												731252.dgn		SCALE 1/2" = 1'-0"					
DRAWN												DATE		APPRVD.		DATE		FILE:	
CHECKED												DATE		WR. NO.		ORDER NO.		SCALE	
F												SANL		000		00			



TYPICAL COMM POLE
DESIGN MODEL - 3-28-18



PRELIMINARY DESIGN
BID DRAWING
RELEASED FOR CONSTRUCTION

X

TITLE

60FT STEEL COMMUNICATION POLE
STATE STREET SUBSTATION
CITY OF APPLETON
OUTAGAMIE COUNTY

FILE NAME

STATE STREET COMM POLE

DATE

8-28-18

DRAWN

MAL



Example Substation
Northland Substation from Southwest
(Photo taken 05/01/17)



Example Substation
Northland Substation from Northwest
(Photo taken 05/01/17)



Example Substation
Northland Substation from North
(Photo taken 05/01/17)



Example Substation
Northland Substation from Southeast
(Photo taken 05/01/17)

PLAN OF OPERATION AND LOCATIONAL INFORMATION

Business Information:

Name of business: Wisconsin Electric Power Company d/b/a We Energies
State Street Substation

Years in operation: 100+

Type of proposed establishment (detailed explanation of business):

New 34.5kV-12kV electric substation replacing existing
34.5kV-4kV Washington Street substation located to the east,
immediately north of the Performing Arts Center (PAC)

Proposed Hours of Operation: None; occupied only for maintenance or during

Day	From	To
Week Day		
Friday		
Saturday		
Sunday		

unplanned events.

Building Capacity and Area:

Maximum number of persons permitted to occupy the building or tenant space as determined by the International Building Code (IBC) or the International Fire Code (IFC), whichever is more restrictive: _____ persons

NA; space is not an occupiable building

Gross floor area of the existing building(s):

NA; No current structures

Gross floor area of the proposed building(s):

Power Distribution Center (PDC) area is approximately 1,125 sf

Identify location, number, capacity and flammable liquid materials stored in storage tanks or containers:

None

Much of this area is covered by equipment.

Describe any potential smoke, odors emanating from the proposed use and plans to control them:

None

Describe Any Potential Noise Emanating From the Proposed Use:

Describe the noise levels anticipated from all mechanical equipment:

Maximum noise levels for each transformer
are 68dB

How will the noise be controlled?

Maximum noise levels have been modeled to
the property line. The highest value is
55.72 dB at the south property line (summary
of calculations attached)

Outdoor Lighting:

Type: downward-shining extenor flood lighting

Location: above the two entry doors of the PDC and on
the lightning mast/ antenna pole

Off-Street Parking:

Number of spaces existing: Approximately 75

Number of spaces proposed: None

Is street access to the subject property adequate or are any street improvements, such as a new turning lane, necessary to minimize impacts on traffic flow?

Replace single curb cut drive into parcel from State
Street with a single drive as shown on the Site Plan.

This will be the primary gate. Secondary gate to
Fair Street to be utilized only during major maintenance
or large equipment replacement projects.

Outdoor Uses:

Type, location, size of outdoor storage area(s) of business property, goods, or merchandise not intended for customer viewing or immediate sale:

None; Equipment and materials may be
temporarily stored at the site during
maintenance or repair activities

Type and height of screening of plantings/fencing/gating for outdoor storage area(s):

No-cut no-climb high-security fence per
standard We Energies design (details attached)
Landscaping adjacent to properties to north.

Type, location, size of outdoor display area(s) of merchandise for sale:

None

Number of Employees:

Number of existing employees: None

Number of proposed employees: None

Number of employees scheduled to work on the largest shift: N/A

Note:

The current property owner has requested that the following language be included in the Special Use Permit:

The Special Use Permit does not take effect unless and until We Energies owns the property.

PLAN OF OPERATION **STATE STREET SUBSTATION**

Overview: Wisconsin Electric Power Company, under the trade name We Energies, is proposing to build a new electric distribution substation in the City of Appleton, which we refer to as State Street Substation. It will replace an existing nearby substation nearby (Washington Street Substation). This electric distribution substation takes high voltage electricity from 34.5 kV sub-transmission lines and decreases or “steps down” the voltage to 12 kV. 12 kV feeders from State Street Substation will be used to deliver electricity to area homes and businesses.

Portions of the City of Appleton, including the majority of the downtown area, are currently fed from 4 kV distribution lines extended from five 34.5 to 4 kV substations located throughout the City. The existing 4 kV substations and equipment are nearing the end of their design life. As part of We Energies’ “Deliver the Future” plan, we intend to address all of the remaining 4 kV facilities in Appleton within the next three to five years.

Construction of the new State Street Substation, which will replace the existing substation located just east of the project site, is the next step in converting the City of Appleton 4 kV system to operate at 12 kV. (Previous phases of the conversion included the construction of 12kV substations on Northland Avenue and Winnebago Street; retirement/removal of 4 kV substations at Northland Avenue, Wisconsin Avenue, and Winnebago Street; and line conversion/rebuild projects in the areas of those substations.) The new substation will include modern technology, such as microprocessor-based protective devices and other equipment which will allow remote substation control and monitoring.

As the conversion proceeds, significant portions of the area’s distribution poles and overhead conductors will be replaced. The rebuilt poles and overhead conductor will be more resilient to weather events.

Ultimately, converting the distribution system to 12 kV operation will increase reliability, decrease maintenance, and provide for future growth. When the entire Appleton 4 kV conversion project is completed (approximately 2022), we expect to make several of the retired 4 kV substation sites available for sale or redevelopment.

Site Summary: The new substation will consist of two 25 MVA transformers with eight 12 kV feeders.

The approximate 0.75 acre substation parcel will have equipment enclosed in a fenced yard, approximately 150 feet in the east-west direction by 125 feet in the north-south direction. In addition to the transformers, the substation yard will also include the following equipment: a pre-assembled, metal-clad power distribution center (“PDC”); high voltage switches and reclosers; high voltage bus equipment; one lightning mast (with antennas for substation control and monitoring); and other associated equipment and structures. Antennas are needed for communication between We Energies sites only, no other companies are allowed to co-locate. The PDC switchgear houses indoor type circuit breakers and associated controls along with other

electrical equipment and instruments. The PDC and other pole-type structures will be a neutral gray color, either painted or galvanized steel.

Downward shining exterior flood lighting will be located above the two entry doors of the PDC and on both lightning masts. The lights will operate as motion-controlled or manually as necessary for construction, security, and maintenance purposes. Security fencing will surround the substation yard - 7'6" in height, using "no-cut" expanded metal fencing material. For additional safety and security, 12" of barbed wire will also be strung at the top of the fence. There will be one sign, identifying the substation and emergency contact information. The sign is expected to be 24" by 32" and will be hung on the fence adjacent to the northwest entrance gate.

Gates will be installed on the east and west sides of the substation fencing. Access to the substation will occur primarily from the entrance off of State Street. The second gate is needed to allow larger vehicles to pull completely through the station and to access all major equipment. The final grade within the substation yard will be crushed aggregate. The substation driveway will be gravel inside of the substation with asphalt pavement present outside of the substation fence and adjacent to Fair Street. A concrete apron will be installed at the end of the State Street driveway, immediately adjacent to the State Street pavement.

Construction: Construction of the substation is expected to begin in the spring of 2019, with the primary construction activities completed by the late fall of 2019. Limited site restoration activities may not be completed until the spring of 2020. Materials and equipment will be delivered directly to the site, by truck, periodically during the periods of construction. The gate along State Street will be the primary delivery gate. Construction activity will occur Monday through Friday, 7:00 a.m. to 5:00 p.m. and as needed on Saturdays 7:00 a.m. to 5:00 p.m. During construction, dust controls will be utilized as needed. Additionally, measures will be taken to keep State Street clear of construction-related debris. Refuse, generated from the construction activity, will be removed from the site regularly during construction and completely after construction.

Operation: After the substation is placed in-service, the substation will be an unmanned facility. No permanent employees will be located or report to the substation on a daily basis. Employees may access the substation for routine maintenance (non-emergency), normally between the hours of 7:00 a.m. and 5:00 p.m. In addition, substation inspections are performed quarterly by a one or two person crew. In the unlikely event of an emergency, employees may report to the substation as necessary. The employees performing maintenance and inspections of the substation typically drive light vans or pick-up trucks. The normal operation of the substation will not produce any future refuse or contaminants to the environment.

State Street Substation Project Summary

Project Description:

Construction of a new 34.5-12 kV electric distribution substation to replace the current Washington Street Substation (SS) and support voltage conversion of the surrounding line distribution area from 4kV to 12kV.

This is the next phase, and final new substation, in a series of planned projects to fully convert the City of Appleton's aging 4kV system to operate at the modern 12kV standard.

Project Drivers:

- The existing Washington Street SS 4kV substation and equipment is nearing the end of its design life.
- The transformer and switchgear at the existing Washington Street SS are more than 60 years old.
- About 50% of the poles in the 4KV distribution area are more than 40 years old. 30% of the poles are more than 50 years old, and 19% of the poles are more than 60 years old.
- Converting the distribution system to 12kV operation will provide for the installation of modern technology that will allow remote substation control and monitoring, increase reliability, and increase capacity to provide for future growth.

New Substation construction overview:

- Construction equipment and layout will be very similar to Northland SS, constructed on Northland Avenue in 2015/2016 and Winnebago Street SS, constructed on Winnebago Street in 2017/2018.
- We Energies plans to purchase an approximate 0.75-acre land parcel just west of the existing Washington Street SS.
- The land consists of a single parcel currently zoned CBD. This zoning is consistent with the City's 2010-2030 Comprehensive Plan, and We Energies does not anticipate a revision to the parcel zoning as part of this project.
- The property is currently utilized as a parking lot. Pavement will be removed prior to substation construction.
- We plan to utilize the majority of the property for the new substation. Once the new substation is constructed, the equipment at Washington Street SS will be demolished. The Washington Street SS and Metro SS properties may be retained by We Energies for placement of lower-profile, enclosed electrical equipment or may be made available for future development. Primary customer decisions/upgrades in the downtown area will help to determine the final plans for the Washington Street SS and Metro SS properties.
- Once the new substation is in place, existing 4kV substations on Water Street (Water Street SS), Durkee Street (Metro SS), and Richmond Street (Bell Heights SS) can also be retired following associated line project work, which is expected to continue for the next several years.
- The substation will include installation of two 25MVA transformers, an enclosed power distribution center (PDC), and a telecommunications/lightning mast.

- The substation will occupy an area of approximately 150 feet east to west by 125 feet north to south and will be surrounded by a 7' 6" "no-cut" expanded metal fence with an additional 12" of barbed wire at the top.
- Modern substation design significantly limits the amount of above-ground construction compared to older substation designs, resulting in improved aesthetics. We Energies will also provide a detailed landscaping plan for this project to assist in this effort.
- Two drives will access the substation, one from State Street and one from Fair Street. The State Street drive will be the primary entrance.

Associated line distribution work to be performed concurrently:

- Poles, transformers, overhead conductors, and other service equipment in the surrounding area will also be replaced as part of the broader conversion project.
- This work will be primarily in the areas between Locust Street, Atlantic Street, Union Street and the Fox River.

Project Schedule:

- We Energies will seek necessary approvals and permits in late 2018/early 2019 and anticipates beginning construction in the late spring of 2019.
- Construction will be complete by late fall 2019. Washington Street SS will remain in operation until the area conversion is completed. Demolition and retirement of the existing Washington Street SS and the remaining substations will occur in the 2021 to 2023 time frame.

Communication Plan:

- We Energies plans contacts with nearby residents that include door to door visits in the immediate vicinity of the planned substation to provide information regarding the upcoming project along with project contact information.

Legal Description
Tax Parcel 315113802

Lot One (1) Certified Survey Map No. 5132 filed in the Office of the Register of Deeds for Outagamie County, Wisconsin on July 18, 2005, in Volume 29 on Page 5132, as Document No. 1671467, being part of Lot Eight (8) and part of Lot Nine (9), Block Twenty-seven (27) FIFTH WARD PLAT, City of Appleton, Outagamie County, Wisconsin.

08/21/18

Proposed We Energies State Street Substation
Calculated Noise Level¹ at Property Line in Decibels (dB)

Reference Property Line	Two Transformer Configuration Noise Level (dB)
North	47.93
South	55.72 ²
East	48.27
West	49.61
Worst Case	55.72 ³

Notes:

- ¹ – All calculations assume a 68 dB noise level from each transformer, the maximum acceptable noise limit per the manufacturer’s performance specifications for this model of transformer.
- ² – The property is bounded by unoccupied commercial and railroad property to the south.
- ³ – Calculated noise level with both transformers operating at 68 dB (highest allowed noise level per specification) at south property line.